

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

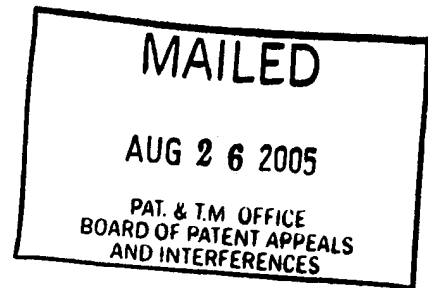
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MICHAEL J. SIWINSKI

Appeal No. 2005-1831
Application No. 09/874,128

ON BRIEF



Before HAIRSTON, JERRY SMITH, and LEVY, Administrative Patent Judges.

LEVY, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1-10¹, which are all of the claims pending in this application.

We REVERSE.

¹ The examiner states (answer, page 2) that "[t]he rejection of claims 1-10 under 35 U.S.C. § 112, second paragraph, is withdrawn." Accordingly, only the rejections under 35 U.S.C. § 103(a) remain before us for decision on appeal.

BACKGROUND

Appellant's invention relates to a power saving method in an organic electroluminescent display using white light emitting members. Specifically, the invention includes the steps of providing an organic electroluminescent color display having colored light emitting elements and white light emitting elements; converting at least a portion of a color digital image to be displayed on the display to a monochrome image, and displaying the monochrome image portion using only the white light emitting elements (specification, page 2).

Claim 1 is representative of the invention, and is reproduced as follows:

1. A method of saving power in a color organic electroluminescent display of the type having color emitting elements with different light emitting efficiencies, comprising the steps of:

a) providing an organic electroluminescent color display having colored light emitting elements and white light emitting elements having light emitting efficiencies greater than at least one of the colored light emitting elements;

b) converting at least a portion of a color digital image to be displayed on the display to a monochrome image; and

c) displaying the monochrome image portion using only the white light emitting elements whereby power is saved.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Hill, Jr.	5,790,096	Aug. 4, 1998
Shimoda	5,944,829	Aug. 31, 1999
Shimizu et al. (Shimizu)	6,069,440	May 30, 2000
Xu et al. (Xu)	6,133,692	Oct. 17, 2000
Nelson et al. (Nelson)	6,311,282	Oct. 30, 2001 (eff. filed Feb. 27, 1996)

Claims 1, 4, 5, and 8-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimizu in view of Hill and Xu.

Claims 2 and 6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimizu, Hill, Xu and Shimoda.

Claims 3 and 7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimizu in view of Hill, Xu and Nelson.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the above-noted rejections, we make reference to the answer (mailed November 2, 2004) for the examiner's complete reasoning in support of the rejections, and to the brief (filed May 10, 2004) for the appellant's arguments thereagainst.

Only those arguments actually made by appellant have been considered in this decision. Arguments which appellant could have made but chose not to make in the brief have not been considered. See 37 CFR § 41.37(c)(1)(vii)(eff. Sept. 13, 2004).

OPINION

In reaching our decision in this appeal, we have carefully considered the subject matter on appeal, the rejections advanced by the examiner, and the evidence of obviousness relied upon by the examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, appellant's arguments set forth in the brief along with the examiner's rationale in support of the rejections and arguments in rebuttal set forth in the examiner's answer. Upon consideration of the record before us, we make the determinations which follow.

We begin with the rejection of claims 1, 4, 5, and 8-10² under 35 U.S.C. § 103(a) as being unpatentable over Shimizu in view of Hill and Xu.

² In the answer, the examiner lists claims 9 and 10 separate from claims 1, 4, 5, and 8. However, in the final rejection, which the examiner relies upon for the statement of the rejection, the examiner lists claims 1, 4, 5, and 8-10 together. It is unclear as to why claims 9 and 10 are separately grouped in the answer.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the

applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole. See id.; In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976).

The examiner's position (final rejection, page 3) is that Shimizu does not teach a digital image processing circuit for converting at least a portion of a color digital image to be displayed on a display to a monochrome image. To overcome this deficiency of Shimizu, the examiner turns to Hill for a teaching of converting at least a portion of a color digital image to be displayed on the display to a monochrome image. The examiner takes the position, (id.), that it would have been obvious to combine the digital image processing circuit of Hill with the color luminescent display of Shimizu, because Hill's teachings (answer, pages 3 and 4) invite the combination.³ The examiner adds (answer, page 4) that neither Shimizu nor Hill discloses that the electroluminescent display is an organic

³We observe that the examiner is silent as to what portion(s) of the quoted passages suggest the combination with Shimizu. Nor does the examiner provide any reasons as to why the quoted portions of Hill suggest the claimed combination. Merely quoting several passages of a reference without any explanation is not helpful to us in deciding the appeal.

electroluminescent display. To overcome this deficiency of Shimizu and Hill, the examiner turns to Xu for a teaching of an organic electroluminescent display for generating white light.

Appellant's position (brief, page 5) is that "the Examiner has failed to establish a prima facie case of obviousness, as there is no explanation provided as to how the prior art suggests combining such teachings in a manner which would result in Applicant's claimed invention." It is argued (brief, page 6) that as noted by the examiner, Shimizu does not disclose converting a portion of a color digital image signal to a monochrome image, and that Shimizu does not teach or suggest the use of white light emitting diodes which are more light efficient than a colored light emitter in order to save power. Appellant acknowledges (*id.*) that Hill discloses converting a color digital image to a monochrome image, but asserts that Hill only discloses using the monochrome image to drive a monochrome display. With regard to Xu, it is argued (brief, page 6) that although Xu discloses a white light OLED emitting device, that "there is no suggestion or motivation to substitute such devices into the teaching of Shimizu et al., and to the contrary it appears to do so would defeat the purpose of the teachings of Shimizu et al., which are directed towards employing a combination of specific

non-organic elements with phosphor elements to obtain a desired light output. Further, there is no teaching or suggestion in Xu et al. to selectively use such white light emitting devices in combination with individually addressable colored light emitting in a color display in order to save power." It is asserted that even if the references were combined, the result would be to use the monochrome image produced by Hill to drive a monochrome display. It is additionally argued (brief, page 7) that "[i]t is noted that the Examiner has apparently relied upon the differential sensitivity of the eye as a basis for meeting the claimed requirement that a more efficient white light emitting element be employed in combination with colored light emitters. As explained in the specification, however, the term efficiency as employed in the present claimed invention is specifically employed in reference to light emitting efficiency, not merely sensitivity of the eye."

From our review of Shimizu, Hill and Xu, along with the arguments of the examiner and appellant, we agree with appellant, for the reasons which follow, that an artisan would not have been motivated to combine the teachings of the references to arrive at the claimed invention as set forth in claim 1. As noted by appellant (brief, pages 5 and 6) Shimizu is directed to, "a white

light emitting non-organic LED that includes an LED that emits one color of light and a phosphor over the LED that absorbs some of the emitted light and reemits another color of light, such that the combination of directly emitted and reemitted light is white. At Col. 21, lines 3-31, Shimizu et al. disclose a monochrome display having the white light emitting diodes. Also, at Col. 22, lines 13-38, they disclose a color display composed of pixels having red, green, blue and white emitting LEDs. When displaying white light, the white emitting LEDs in the pixels are used (Col. 22, lines 32-35)."

Turning to Hill, we find that the reference is directed to electronic control systems for accepting video signals of numerous formats and types, and displaying the video signals on a wide variety of flat panel displays (col. 1, lines 9-12). Although Hill discloses (col. 2, lines 58-62) that full color images can be reduced to grey scale for display on a monochrome screen, we find no teaching or suggestion in either reference, for providing Shimizu with converting a color image to monochrome, for display on a color display, because in Hill, the monochrome image is displayed on a monochrome screen, and not on a color display, as recited in claim 1. We note that the examiner, in both the final rejection and answer, fails to set

forth any motivation for combining the teachings of Shimizu and Hill. Rather, the examiner's assertion that Hill invites the combination by his disclosure and lists portions of Hill without any explanation as to why the cited portions of Hill suggest the combination. From the lack of any explanation by the examiner, and our failure to find any disclosure that would suggest combining Shimizu and Hill, we find that the only suggestion for modifying Shimizu in the manner proposed by the examiner to meet the above-noted limitation stems from hindsight knowledge derived from the appellant's own disclosure. The use of such hindsight knowledge to support an obviousness rejection under 35 U.S.C. § 103 is, of course, impermissible. See, for example, W. L. Gore and Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). "[T]eachings of references can be combined only if there is some suggestion or incentive to do so." (id.). Here, the prior art contains none. In fact, the advantages of "converting at least a portion of a color digital image to be displayed on the display to a monochrome image, and displaying the monochrome image portion using only the white light emitting elements whereby power is saved," as recited in claim 1, is not appreciated by the prior art applied by the examiner.

Turning to Xu, we agree with the examiner, for the reasons set forth in the final rejection, that it would have been obvious to combine the teachings of Shimizu and Xu to provide Shimizu with the use of an organic electroluninescent display. However, as we found, supra, because it would not have been obvious to have combined Hill and Shimizu, we likewise find that Xu does not make up for the deficiencies of Hill and Shimizu.

From all of the above, we find that the examiner has failed to establish a prima facie case of obviousness of claim 1. Accordingly, the rejection of claim 1 under 35 U.S.C. § 103(a) is reversed. As independent claim 5 contains similar limitations, the rejection of claim 5 under 35 U.S.C. § 103(a) is reversed.

Turning to independent claims 9 and 10, we note that these claims do not recite converting at least a portion of a digital color image to be displayed into a monochrome image. However, both claims recite that the white light emitting elements are at least twice as efficient as at least one of the colored light emitting elements. We are not persuaded by the examiner's assertion that (final rejection, pages 6 and 7) this feature is admitted to be known in the art (specification pages 2 and 3). From our review of the specification, we find that the disclosure

is presented, as asserted by the examiner, but that the disclosure is not in the Background of the Invention as admitted prior art, but rather is in the Detailed Description of the Invention, as part of appellant's invention. Accordingly, this disclosure in the detailed Description of the Invention is not an admission of prior art as asserted by the examiner.

Although we agree with the examiner (answer, page 5) that during examination, the claims must be interpreted as broadly as their terms reasonably allow, we do not agree with the examiner (answer, page 5) that the term efficiency would have been understood by an artisan to refer to light emitting efficiency in units of candelas/ampere.

Since the limitation that the white light emitting element is at least twice as efficient as at least one of the colored light emitting elements is recited in each of independent claims 9 and 10, we will not sustain the 35 U.S.C. § 103(a) rejection of independent claims 9 and 10. Accordingly, the rejection of claims 9 and 10, under 35 U.S.C. § 103(a) is reversed, along with the rejection of claims 4, 5, and 8, which depend from independent claims 1 and 5.

We turn next to the rejection of claims 2 and 6 under 35 U.S.C. § 103(a) as being unpatentable over Shimizu, Hill, Xu and

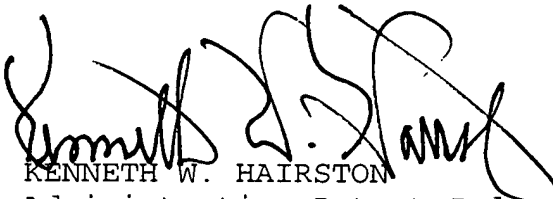
Shimoda. We cannot sustain the rejection of claims 2 and 6 because Shimoda does not make up for the deficiencies to the basic combination of Shimizu, Hill and Xu. Accordingly, the rejection of claims 2 and 6 under 35 U.S.C. § 103(a) is reversed.


We turn next to the rejection of claims 3 and 7 under 35 U.S.C. § 103(a) as being unpatentable over Shimizu, in view of Hill, Xu and Nelson. We cannot sustain the rejection of claims 3 and 7 because Nelson does not make up for the basic deficiencies of Shimizu, Hill and Xu. Accordingly, the rejection of claims 3 and 7 under 35 U.S.C. § 103(a) is reversed.

CONCLUSION

To summarize, the decision of the examiner to reject claims
1-10 under 35 U.S.C. § 103 is REVERSED.

REVERSED


KENNETH W. HAIRSTON
Administrative Patent Judge


JERRY SMITH
Administrative Patent Judge


STUART S. LEVY
Administrative Patent Judge

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